

## Foreword

The operation of present-day and ancient geosystems of the Arctic polar zone is a subject of research under a great number of international projects. The regularities found in the contemporary development of relief in the polar zone provide a good basis for paleogeographic reconstructions and forecasting studies concerning the nature of landscape change in the Earth's surface at a variety of spatial and temporal scales.

The region around the North Pole embraces mostly frozen sea basins and archipelagos of glaciated islands featuring oases and coastal plains with marine terraces as well as rock and ice cliff shores. The Arctic occupies a special place in the international scientific discussion of changes in the individual elements of the Earth's surface induced by global climate change.

The Svalbard Archipelago, especially its largest island of Spitsbergen, is a unique area with all kinds of glaciers, a morpholithological diversity of marginal zones, inland and coastal oases, different types of slopes, an abundance of proglacial streams of various courses and level of formation, extensive periglacial plains, as well as diversified coasts with fjords and rock and ice shores.

Spitsbergen is a site of international interdisciplinary studies to which Polish polar research has made a substantial contribution. Established 50 years ago, the Polish Polar Station at Hornsund offers an excellent opportunity for research. The multi-year studies carried out in different areas of Spitsbergen by teams from a variety of academic centres in Poland have contributed a lot to our under-

standing of the geographical environment of this highly interesting place. The Geomorphological Workshop (2003) and the Glaciological Workshop (2004) organised in Spitsbergen by the Association of Polish Geomorphologists were good occasions for a field discussion and a survey of the research done on the past and present morphogenetic environment of Spitsbergen.

The 4th International Polar Year 2007/2008 provides an excellent opportunity for an overview of polar research and an appraisal of its cognitive and application merit. Special attention should be paid to the formulation of new research tasks to be undertaken in international co-operation.

The IAG/AIG Regional Conference on Geomorphology "Geodiversity of polar landforms" (Longyearbyen, 1–5 August, 2007) being now organised by the Association of Polish Geomorphologists is part of the International Polar Year celebrations. The present volume of *Landforms Analysis* contains its reviewed papers and posters as well as original descriptions of field trip sites within selected Spitsbergen areas.

Polar regions, including Spitsbergen, have been undergoing ever greater transformations; the range of glaciated areas keeps shrinking, not only as a result of global climate change, but also of man's multi-directional activity. We are convinced that the Spitsbergen meeting is going to be a good opportunity to experience the natural uniqueness of the polar landscapes and to discuss the character and current state of glaciation of the various parts of the world.

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Guest Editors